

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 63-062313

(43)Date of publication of application : 18.03.1988

(51)Int.Cl.

H01L 21/203

H01L 21/26

(21)Application number : 61-207087

(71)Applicant : FUJITSU LTD

(22)Date of filing : 03.09.1986

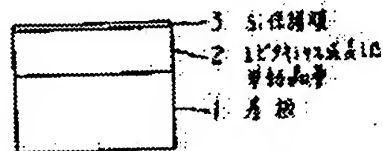
(72)Inventor : YAMAMOTO TATSU  
NANBU KAZUO

## (54) MANUFACTURE OF SEMICONDUCTOR DEVICE

### (57)Abstract:

**PURPOSE:** To prevent the deterioration of a single crystal layer as well as to contrive simplification of the manufacturing process of the title semiconductor device by a method wherein the compound semiconductor single crystal layer grown in a growing device is picked out to outside the growing device after its surface has been coated with a silicon film.

**CONSTITUTION:** After a compound semiconductor single crystal layer 2 has been epitaxially grown on a single crystal substrate 1 by performing a molecular beam epitaxial growing method, the surface of the grown single crystal layer is coated with a silicon film 3, and it is used as a protective film for oxidation. When the Si molecular beam is used, the coefficient of adhesion on the surface of the compound semiconductor single crystal becomes high on the wide temperature range from the growing temperature to the room temperature of the compound semiconductor single crystal, the formation of an Si film is started immediately in the stage when the crystal growth is finished, and the falling period of the substrate temperature can be utilized in the above-mentioned process. Also, as said Si film is formed densely and uniformly, it sufficiently functions as a protective film if it is formed in the thickness same as or thicker than that of the single atomic layer.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]